

Abstract of the Disclosure

Disclosed is a novel method and system for efficiently synchronizing, transmitting, and receiving data between a base station and a plurality of customer premises. A MAC coprocessor (MCP) is implemented, which works in conjunction with the MAC in order to produce a robust, high throughput communication system. The MAC coprocessor performs many of the tasks typically performed by prior art MAC's, including: during a downlink, storing a data frame, sorting the data frame according to modulation type or other criteria, determining when the data frame is full, and appending a set of CPE settings to the data frame. During an uplink, the MAC coprocessor receives all data and routes the data either to the MAC or a network backhaul. A MAC coprocessor may be used in both the base station and Customer Premises. In both the downlink and uplink processes, having a MAC coprocessor working in conjunction with the MAC may significantly increase the communication system's throughput.

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